

University of Maryland - Baltimore UMB BioPark 801 West Baltimore Street, Baltimore, Maryland 21201

AGENDA AND PROGRAM DESCRIPTION

8:00 a.m. Registration ar	ıd Continental 1	Breakfast
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9:00 a.m. Welcome

Dr. David Ramsay, President University of Maryland, Baltimore

Eric M. Seleznow, Executive Director Governor's Workforce Investment Board (GWIB)

William G. (Bill) Robertson, President and CEO

Adventist HealthCare, Inc.; Chair, Governor's Workforce Investment Board

9:15 a.m. **Overview**

Edward M. Rudnic, Ph.D., President & CEO MiddleBrook Pharmaceuticals; Chair, Technology Council of Maryland; Co-Chair GWIB Bioscience Steering Committee

David W. Edgerley, Secretary, Maryland Department of Economic Development and representing the Life Sciences Advisory Board

Thomas E. Perez, Secretary, Department of Labor, Licensing and Regulation

9:30 a.m. **Remarks**

The Honorable Martin O'Malley, Governor

10:00 a.m. **Bioscience in Maryland**

Edward M. Rudnic, Ph.D., President & CEO, MiddleBrook Pharmaceuticals; Chair, Technology Council of Maryland; Co-Chair GWIB Bioscience Steering Committee

Charles Fleischman, Past President, Digene Corporation Co-Chair GWIB Bioscience Steering Committee

10:30 a.m. Preparing Maryland's Workforce for the 21st Century

Panel Discussion

11:45 a.m. **Summary and Wrap-up**

Thomas E. Perez, Secretary, Department of Labor, Licensing and Regulation

Bioscience Workforce Conference

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BACKGROUND AND PURPOSE

Background

Governor O'Malley's vision of "workforce driven economic development" is based on the notion that Maryland's future success in the national and global economy will be driven by a highly educated and skilled workforce. Through the Center for Industry Initiatives, the Governor's Workforce Investment Board (GWIB) convened a diverse group of business, government, education, and philanthropic leaders to define the workforce challenges facing Maryland's emerging bioscience industry.

Purpose

The Bioscience Workforce Conference will provide an overview of the research conducted by the GWIB's Bioscience Steering Committee. The Committee's report will be published following the Conference, with the new ideas and input gathered from the workforce stakeholders in attendance, and will contribute to the Governor's vision for workforce creation. A post-conference report will be prepared with the results and recommendations from the Conference.

Bioscience Conference Sessions

Bioscience in Maryland

This session will provide an overview of the history, mission, goals, and near-term plans of the Life Science Advisory Board (LSAB). The GWIB and the GWIB Bioscience Steering Committee are working closely with the LSAB. In addition, the Steering Committee chairs will discuss the Center for Industry Initiative process, and provide an overview of the key findings of the Committee's research. This session will also review the five critical bioscience workforce development issues identified by the Committee.

Preparing Maryland's Bioscience Workforce for the 21st Century

This session will address challenges facing the bioscience industry related to attracting, educating and training a highly educated and skilled workforce.

<u>Topic 1 - Expanding the Pipeline of Youth Entering the Biosciences Industry</u>

Like many industries, bioscience is concerned about its future workforce. Although there is a concern about how to attract newly degreed and experienced bioscience workers to Maryland, there is also concern about how to get youth interested in science. Committee recommendations for discussion include:

- Continuing to support and increase programs like the Maryland Business Roundtable for Education, CTE programs, MdBioLab, UMBI's Loaner Lab, and J. Craig Venter's Discover Genomics! Mobile lab program.
- Developing a set of regionally defined bioscience industry skill standards to align the workforce needs of the state's bioscience laboratories (industrial, governmental, and academic) with curriculum.
- Supporting STEM initiatives to ensure students are receiving the necessary math and science skills.
- Support and develop more programs like "Project Lead the Way" with an emphasis on programs that reach the entire student body, as opposed to only subsets.

• Provide data that will attract people to the field of biotechnology, such as information on the average salary.

Topic 2 - Tapping New Sources for Biotech Talent

As we heard earlier, bioscience workers are highly educated – 77% have a B.S. degree or higher. The industry recruits from colleges and universities and from other bioscience companies and organizations. However, the committee recognized that Maryland is home to many federal and military research facilities. They are growing for various reasons, including actions that occurred due to the Base Realignment and Closure Act. Committee recommendations to discuss include:

- Utilizing the military talent pool, since the presence of several military research facilities in Maryland provides the state with a unique workforce pool that has not been effectively tapped.
- Accessing untapped, diverse and non-traditional populations.
- Developing training that would lead to "certification" of entry level workers.

Topic 3 - Preparing a High Skilled Workforce for a Fast Paced Industry

Bioscience is a rapidly changing industry. The committee is concerned that educators and curricula are not keeping up with these changes. Incumbent workers are not immune to these changes, the average bioscience worker can expect five to seven career shifts during his or her working lifetime. The pressure on workers to upgrade skills is and will continue to be considerable. Committee recommendations to discuss include:

- Ensuring that there are supplies of experienced new workers, as well as workers with specialty skills, that align with a highly regulated work environment.
- Supplementing in-house training (necessary for proprietary and very specialized job skills) with external "common needs" academic and technical skills training.
- Inform educators at the secondary and post-secondary levels so that they have a better understanding of the occupations, competencies and skill requirements in the industry.

Bioscience Workforce Conference

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WELCOME

Dr. David J. Ramsay, President of the University of Maryland, Baltimore since 1994, was instrumental in the Baltimore's West Side redevelopment through community and business partnerships, and the development of the UMB BioPark, which promotes bioscience innovation and collaborative research opportunities. Dr. Ramsay is a member of Maryland's Life Science Advisory Board (LSAB).

William G. "Bill" Robertson chairs the Governor's Workforce Investment Board. He is the President and CEO of Adventist HealthCare, Inc., one of the largest private employers in Montgomery County. Adventist Healthcare employs more than 7,600 people and cares for nearly 450,000 patients annually. Mr. Robertson has served as President and CEO of Adventist HealthCare, Inc. since the spring of 2000, and has been a health care executive for the past 22 years.

Secretary Thomas E. Perez is a nationally recognized consumer advocate and civil rights lawyer. He was appointed by Governor Martin O'Malley in January 2007 to serve as the Secretary of the Department of Labor, Licensing and Regulation (DLLR). Among other responsibilities, Secretary Perez oversees the implementation of workforce development initiatives across the state, and works closely with businesses, local governments, educators and other stakeholders to design and implement programs and services that meet the human capital needs of employers.

BIOSCIENCE IN MARYLAND

Secretary <u>David W. Edgerley</u> joined the Maryland Department of Business and Economic Development following innovative and ambitious economic development efforts in Allegany and Montgomery County. Secretary Edgerley began his career in Allegany County, directing both the Office of Development Assistance and the Department of Economic Development. As Director of Economic Development for Montgomery County, he created Montgomery County's highly successful technology incubator network, now home to 80 life sciences and technology companies. He also led development of the Shady Grove Life Sciences Center and expanded high-tech business partnerships with Johns Hopkins University, the University of Maryland and leading technology companies.

Dr. Edward M. Rudnic, Ph.D., Founder, President and CEO of MiddleBrook Pharmaceuticals, Inc., has more than 25 years of industry experience with the development and commercialization of a wide range of pharmaceutical products. Dr. Rudnic directed the research and development activities in the U.S. for Shire Pharmaceuticals, was head of formulation development and conducted pharmaceutical process development at Schering-Plough Corporation, and was a Research Investigator at E.R. Squibb and Sons. Dr. Rudnic is the Chair of the Technology Council of Maryland and Co-Chair of the GWIB Bioscience Steering Committee. Dr. Rudnic was appointed by Governor O'Malley to the Governor's Work Force Investment Board in 2007. Dr. Rudnic is a Registered Pharmacist and holds adjunct professorships at the University of Rhode Island and the University of Maryland.

Charles M. Fleischman is the former President, CFO, COO and member of the Board of Directors of Digene, which recently merged with QIAGEN to create a new company that is the market and technology leader in molecular diagnostics. Prior to joining Digene, Mr. Fleischman was an investment banker focused on emerging growth healthcare and technology companies. Mr. Fleischman serves on the Board of Directors of InHealth, the Institute for Health Technology Studies, Washington, D.C., and Dako Corporation, Copenhagen, Denmark. He is also Chair of the Subcommittee on Business Environment for the Maryland LSAB.

PANELISTS

Darlene T. Carver, MBA, CPS is the Founder of Merlin & Associates, Inc., a training and consulting firm. Ms. Carver has more than 30 years of experience facilitating personal and professional development workshops in governmental, industrial and academic settings. Her clients include the U.S. Social Security Administration, the Naval Academy, Department of Defense, Arthur D. Little, Fannie Mae, Sony Corporation of America, among others. Ms. Carver works at Ft. Detrick in Frederick, MD assisting clients in finding new careers post-retirement, or transitioning into new positions within the same profession. She chairs the Workforce Development Board for Frederick County, is a member of the Association of Career Professionals (ACP) and the National Speakers Association (NSA).

Dr. Jon T. Conary, Ph.D., Senior Director of Manufacturing, joined Human Genome Sciences, Inc. (HGSIN) in 2003. His area of expertise is cell culture and production. Prior to HGSI, Dr. Conary served on the faculties of Washington University, St. Louis and Vanderbilt University. He spent five years as Director of Process Development at BioMarin Pharmaceutical, and was a member of the Aldurazyme project team. His interests include organizational leadership and development.

Dr. Paul A. Hanle is the President of the Biotechnology Institute, an independent, nonprofit organization aimed at engaging, exciting and educating the public, students and teachers about biotechnology and its immense potential for solving human health and environmental problems. Prior to joining the Institute, Dr. Hanle was the Executive Director of the Maryland Science Center in Baltimore and the president of the Academy of Natural Sciences of Philadelphia.

Dr. Collins Jones is the Coordinator for the Biotechnology Program at Montgomery College and works closely with leading Biotechnology companies in Montgomery County. Dr. Jones serves as Adjunct Professor and Advisor to the Biotechnology Masters Degree program at the Johns Hopkins University and is Co-Founder of TechnoVisions, a company dedicated to creating multimedia resources for the Biotechnology community. Prior to his appointment at Montgomery College, Dr. Jones spent almost 10 years as a Research Scientist at the National Institutes of Health in Bethesda, Maryland.

Katharine M. Oliver is the Assistant State Superintendent for the Division of Career Technology and Adult Learning at the Maryland State Department of Education and is the nation's most senior State Director of Career Technology Education. Her division's products and services help school systems, community colleges, and community-based organizations prepare students of all ages for success in careers and lifelong learning through career and technology education and adult literacy programs. The division also has responsibility for education initiatives in the State's adult and juvenile correctional facilities.

Dr. Hercules Pinkney is the Vice President and Provost of the Germantown Campus of Montgomery College and serves as the chief academic and student services administrator. He is the College's point person for an innovative project in collaboration with Montgomery County, the University of Maryland College Park, business leaders, and others to construct a million square foot Life Sciences and Technology Park, a county-operated technology incubator. Dr. Pinkney is a member of Maryland's LSAB and has served as the Chairman of the Board of Directors of the Gaithersburg-Germantown Chamber of Commerce. He is a member of the Board of Directors of Leadership, and was named the 2003 Educator of the Year by the African American Chamber of Commerce.

Eric Seleznow is the Executive Director of the Governor's Workforce Investment Board (GWIB). The GWIB is Maryland's chief policy-making body on workforce development. Previously, he was the Director of Workforce Investment Services for the Montgomery County Department of Economic Development. Mr. Seleznow oversaw the County's workforce development system and has over twenty years of experience with local employment and training programs. He was formerly the Workforce Manager for the Montgomery County Department of Correction and Rehabilitation, where he was responsible for the development and implementation of jail industry projects and employment re-entry programs. Mr. Seleznow is co-founder and past chairperson of the Employment and Training Advocacy

Network of Montgomery County, a former member of the Montgomery County Workforce Development Board, and is active in local and national workforce development matters. He is an experienced trainer and facilitator in workforce and offender employment issues.

June Streckfus is the Executive Director of the Maryland Business Round Table (MBRT), a coalition of more than 120 leading Maryland businesses that have made a long-term commitment to support education reform and improve student achievement in Maryland. MBRT has been recognized by the National Alliance of Business, the Business Roundtable, and the U.S. Department of Education for its successful efforts to involve business as a full partner in comprehensive education reform. Ms. Streckfus serves on the Maryland's K-16 Leadership Council, Johns Hopkins School of Education National Advisory Council, University of Maryland President's Advisory Council, Baltimore County Executive's Advisory Board on Higher Education, College of Notre Dame Teacher Education Advisory Board, CCBC's TIME Center Steering Committee, Ready-at-Five Partnership, and numerous other advisory committees.

Richard Zakour, Ph.D, is the Executive Director of MdBio and MdBio Foundation. Zakour is a 23-year veteran of the biotechnology/pharmaceutical industry. Before joining TCM/MdBio, Zakour was the general manager for Fisher BioSciences, and has held various senior management positions with McKesson Clinical Services, DynCorp and Cambridge.